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## Campylobacteriosis

### **Overview** <sup>(1,2)</sup>

For a complete description of campylobacteriosis, refer to the following texts:

- Control of Communicable Diseases Manual (CCDM).
- Red Book, Report of the Committee on Infectious Diseases.

### **Case Definition** <sup>(3)</sup>

#### *Clinical description*

An infection that may result in diarrheal illness of variable severity.

#### *Laboratory criteria for diagnosis*

Isolation of *Campylobacter* from any clinical specimen.

#### *Case classification*

*Confirmed:* a case that is laboratory confirmed.

*Probable:* a clinically compatible case that is epidemiologically linked to a confirmed case.


### **Information Needed for Investigation**

- **Verify the diagnosis.** What laboratory tests were conducted and what were the results?
- **When investigating gastrointestinal illness of unknown etiology,** see the “Outbreak Investigation, Acute Gastroenteritis” section of this Manual.
- **Establish the extent of illness.** Determine if household or other close contacts are, or have been, ill by contacting the health care provider, patient or family member.
- **Contact the Regional Communicable Disease Coordinator,** if an outbreak is suspected, or if cases are in high-risk settings or jobs such as food handlers, child care, or health care.
- **Contact the Bureau of Child Care,** if cases are associated with a child care facility.

### **Case/Contact Follow Up And Control Measures**

Determine the source of infection to prevent other cases:

- Does the case or a member of the case's household attend a child care center or nursery school?
- Does the case or a member of the case's household work as a food handler or healthcare provider?
- Has the case traveled out of the country to an endemic area?

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- Does the case have contact with excreta from wild or domestic animals (including kittens or puppies)?
- Does the case work in poultry or other animal operations?
- Have there been other cases linked by time, place or person?


### Control Measures

- See the Control of Communicable Diseases Manual, *Campylobacter* Enteritis, “Methods of control.”
- See the Red Book, *Campylobacter* Infections, “Control Measures.”
- **Food Handlers and Health Care Personnel:**  
Because of the known risk of transmission of enteric pathogens from individuals with diarrhea, food handlers and symptomatic health care personnel with patient care responsibilities should **not** be permitted to work until the diarrhea has ended. Asymptotically infected food handlers or health care personnel need **not** be excluded from work, but the need for handwashing after defecation should be stressed.<sup>(4)</sup> Exclusion of asymptomatic, convalescent, stool-positive individuals is indicated only for those with questionable handwashing habits.<sup>(1)</sup>
- **Child Care Employees and Attendees:**  
Symptomatic childcare employees should **not** be permitted to work until the diarrhea has ended. The need for handwashing after defecation should be stressed. Exclusion of asymptomatic, convalescent, stool-positive individuals is indicated only for those with questionable handwashing habits.<sup>(1)</sup> Children with diarrhea should be excluded from child care, or cared for in a separate protected area until diarrhea has subsided.<sup>(2)</sup> In child care settings where children are not toilet-trained, it is prudent to treat with antibiotics. Symptomatic children should be excluded from child care for two days after beginning antibiotics or until the child is asymptomatic, whichever is the shorter period of time.<sup>(5)</sup> Proper hand washing technique after changing diapers and before food preparation is very important. Toys, countertops, and diaper changing areas should be cleaned more frequently, especially if used by children with diarrhea.<sup>(5)</sup>

All rules and guidelines regarding hand washing, toileting, diapering, and food handling, referenced in Licensing Rules for Group Day Care Homes and Child Day Care Centers<sup>(7)</sup> should be followed rigorously.

### Laboratory Procedures

**Specimens:** Diagnosis is based on culture of the organism from feces or blood. The cultured organism should be tested for antibiotic sensitivities. In addition, a rise in the IgG titer can be detected. The use of serologic methods for diagnosis is at present a research tool only. Use of PCR techniques for direct detection of specimens has been successful in research studies, but has not yet been applied to the clinical setting.<sup>(6)</sup>

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### Enteric cultures:

Collect specimens in Cary-Blair media using the enteric specimen collection kit supplied by the State Public Health Laboratory. Specimens should be shipped chilled.

Additional information on laboratory procedures can be obtained from the Regional Communicable Disease Coordinator or from the SPHL web site at:

<http://www.dhss.state.mo.us/Lab/index.htm>. (8 May 2003)


### **Reporting Requirements**

Campylobacteriosis is a Category II reportable disease and shall be reported to the local health authority or to the Missouri Department of Health and Senior Services (DHSS) within three days of first knowledge or suspicion by telephone, facsimile, or rapid communication.

1. For confirmed and probable cases, complete a "Disease Case Report" (CD-1) and a "Record of Investigation of Enteric Infection" (CD-2C) revised 6/02.
2. Entry of the completed CD-1 into the MOHSIS database negates the need for the paper CD-1 to be forwarded to the Regional Health Office.
3. Send the completed secondary investigation form to the Regional Health Office.
4. All outbreaks or "suspected" outbreaks must be reported as soon as possible (by phone, fax, or e-mail) to the Regional Communicable Disease Coordinator. This can be accomplished by completing the Missouri Outbreak Surveillance Report (CD-51).
5. Within 90 days from the conclusion of an outbreak, submit the final outbreak report to the Regional Communicable Disease Coordinator.

### **References**

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2. American Academy of Pediatrics. "*Campylobacter* Infections." In: Pickering L., ed. 2000 Red Book: Report of the Committee on Infectious Diseases. 25<sup>th</sup> ed. Elk Grove Village, IL. 2000: 196-198.
3. Centers for Disease Control and Prevention. Case Definitions for Infectious Conditions Under Public Health Surveillance. MMWR 1997; 46 (No. RR-10). "Campylobacter Infection," 1990, <http://www.cdc.gov/epo/dphsi/casedef/campylobactercurrent.htm>. (8 May 2003)
4. Evans, AS and Brachman, PS, ed. Bacterial Infections of Humans Epidemiology and Control, 3<sup>rd</sup> ed. New York: Plenum, 1998: 169-190.
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6. Mandell, GL, Bennett, JE, and Dolin, R, ed Mandell Douglas and Bennett's Principles and Practice of Infectious Diseases, 5<sup>th</sup> ed; vol 2. New York: Churchill Livingstone, 2000: 2276-2285.

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7. Missouri Department of Health and Senior Services. 19 CSR 30-62-Health. Chapter 62-Licensing Rules for Group Day Care Homes and Child Day Care Centers.  
<http://www.sos.state.mo.us/adrules/csr/current/19csr/19c30-62.pdf>. (8 May 2003)

### **Other Sources of Information**

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[http://www.cdc.gov/ncidod/dbmd/diseaseinfo/campylobacter\\_g.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/campylobacter_g.htm). (8 May 2003)
2. Missouri Department of Health and Senior Services, *Community Data Profile*,  
<http://www.dhss.state.mo.us/GLRequest/CountyProfile.html>. (8 May 2003)
3. FDA/CFSAN Bad Bug Book, *Campylobacter jejuni*  
<http://www.cfsan.fda.gov/~mow/chap4.html>. (8 May 2003)
4. Karolinska Institutet (Swedish Medical School), Alphabetical Listing of Diseases and Disorders  
<http://www.mic.ki.se/Diseases/alphalist.html>. (8 May 2003)
5. *The Merck Veterinary Manual*. 8<sup>th</sup> Ed. Ed. Susan E. Aiello. Whitehouse Station, NJ: Merck & Co., Inc., 1998. <http://www.merckvetmanual.com/mvm/index.jsp> (search “campylobacter”). (8 May 2003)